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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,137	08/16/2000	Gilad Almog	49959-167	3817

32588 7590 07/09/2003

APPLIED MATERIALS, INC.
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SANTA CLARA, CA 95050

EXAMINER

PHAM, HOA Q

ART UNIT PAPER NUMBER

2877

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,137

Applicant(s)

ALMOGY ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 5-7, 12, 13 and 23-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11 and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Since applicant confirmed that claim 19 depends on claim 17, claim 17 will be examined with the elected group. Thus, claims 1-4, 8-11, and 14-22 will be examined as below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 14, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kohno (5,381,225) or Imamura et al (4,568,835).

Claims 1, 14, and 18 are read on the teachings of Kohno or Imamura et al.

Kohno discloses a light source (1) providing a light beam, a scanner (polygonal mirror)(4) imparting scanning deflection to the light beam to provide a scanning beam approaching a substrate at a first angle (parallel to the substrate) and a deflection element (30) selectively insertable into an optical path of the scanning beam and deflecting the scanning beam so as to approach the substrate (8) at a second angle (see figure 5, column 8, lines 23-42).

Imamura et al discloses a light source (LS) providing a light beam (1), a scanner (mirror)(4) imparting scanning deflection to the light beam to provide a scanning beam approaching a substrate (6) at a first angle and a deflection element (3) selectively

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insertable into an optical path of the scanning beam and deflecting the scanning beam so as to approach the substrate (6) at a second angle (see figure 1, column 2, lines 31-55).

4. Claims 1, 14-15, and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Murakami et al (4,886,975).

Regarding claims 1, 14, and 18, Murakami et al discloses a light source (10) providing a light beam, a scanner (11) imparting scanning deflection to the light beam to provide a scanning beam approaching a substrate (18) at a first angle and a deflection element (13, 120) selectively insertable into an optical path of the scanning beam and deflecting the scanning beam so as to approach the substrate (18) at a second angle (see figures 1, 7-10).

Regarding claim 15, figure 7 shows that the first angle is oblique to the substrate and the second angle is perpendicular to the substrate.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4, 8-11, 15-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohno in view of Neri et al (EU-0582868)(of record).

Regarding claims 2-3, 15-16, Kohno does not explicitly teach the arrangement between the optical elements so that the first angle is normal to the substrate and the second angle is oblique to the substrate or vice versa. However, it would have been obvious to one having ordinary skill in the art to arrange the optical elements, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claim 4, column 7, line 7 of Kohno teaches that the mirror 4 is a polygon mirror.

Regarding claims 8-11 and 19-22, Kohno does not explicitly teach the use of a glass wedge for focusing light onto the surface of the substrate. However, such a feature is known in the art as taught by Neri et al. Neri et al teaches the use of glass wedge (13) for focusing light on the surface of an object (6) (see figure 2). Those of ordinary skill in the art at the time the invention was made to replace the reflection mirrors 18 and 19 of Kohno by a glass wedge of Neri because they are function in the same manner. A substitution for each other is generally recognized as being within the level of ordinary skill in the art.

Regarding claim 17, Kohno does not teach that the mirror (30) is insertable by an actuator; however, it would have been obvious to use any known kind of mechanism unit for moving the mirror, for example, an actuator, because this is a known element which is known to serve for the purpose of Kohno of moving the mirror in and out of the optical path.

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7. Claims 2-4, 8-11, 16-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al view of Neri et al (EU-0582868)(of record).

Regarding claims 2-3, and 16, Murakami et al does not explicitly teach the arrangement between the optical elements so that the first angle is normal to the substrate and the second angle is oblique to the substrate or vice versa. However, it would have been obvious to one having ordinary skill in the art to arrange the optical elements, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claim 4, column 2 line 11 of Murakami et al teaches that the mirror 11 is a scanning mirror.

Regarding claims 8-11 and 19-22, Murakami et al does not explicitly teach the use of a glass wedge for focusing light onto the surface of the substrate. However, such a feature is known in the art as taught by Neri et al. Neri et al teaches the use of glass wedge (13) for focusing light on the surface of an object (6) (see figure 2). Those of ordinary skill in the art at the time the invention was made to insert into the device of Murakami et al a glass wedge taught by Neri. The rationale for this modification would have arisen from the fact that using such glass wedge would control the angle of the light incident on the substrate.

Regarding claim 17, Murakami et al does not teach that the mirror (13, 120) is insertable by an actuator; however, it would have been obvious to use any known kind of mechanism unit for moving the mirror, for example, an actuator, because this is a

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known element which is known to serve for the purpose of Murakami et al of moving the mirror in and out of the optical path.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miura et al (5,963,316) a method and apparatus for inspecting a substrate.

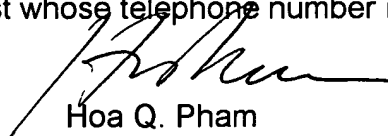
Response to Arguments

9. Applicant's arguments with respect to claims 1-4, 8-11, 14-22 have been considered but are moot in view of the new ground(s) of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
July 2, 2003